IN THE CLAIMS

Please amend the claims as follows:

1-64. (Canceled)

65. (Previously Presented) A method comprising:

forming a conductive plug in contact with an integrated circuit substrate and vertically extending from the substrate;

forming a horizontally extending conductive line in contact with the conductive plug, wherein the conductive line has a lower surface facing the substrate and vertically spaced apart from the substrate;

exposing a lateral surface of the conductive plug and the lower surface of the conductive line; and

forming a single diffusion barrier after forming the conductive plug and the conductive line, with at least a first portion of the diffusion barrier between the lower surface of the conductive line and the substrate.

66. (Previously Presented) The method of claim 65 wherein the conductive plug and the conductive line comprise a copper-, silver-, or gold-based material.

67. (Previously Presented) The method of claim 65 further comprises forming an insulative structure after forming the single diffusion barrier by spin-coating an aerogel or xerogel.

68. (Previously Presented) The method of claim 65 wherein forming the diffusion barrier comprises forming a graded composition of WSix, where x varies from 2.0 to 2.5.

69. (Previously Presented) The method of claim 65 wherein forming the diffusion barrier comprises:

forming a graded composition of WSix, where x varies from 2.0 to 2.5; and

nitriding the graded composition of WSix.

70. (Previously Presented) The method of claim 65 wherein forming the diffusion barrier comprises:

introducing tungsten hexaflouride and hydrogen gases into a processing chamber;

introducing silane gas into the chamber after introducing the tungsten hexaflouride gas; and

terminating introduction of the silane gas before terminating introduction of the tungsten hexaflouride and hydrogen gases into the chamber.

71. (Previously Presented) The method of claim 65 wherein forming the conductive plug and the conductive line comprises:

forming a mask layer on the substrate with contact plug holes that open to the integrated circuit substrate, and trenches intersecting at least some of the contact plug holes;

depositing a seed layer over the mask layer;

electroplating conductive material over the seed layer to form the conductive plugs;

removing excess material to form the conductive line; and

removing at least a portion of the mask layer to form a opening between the conductive line and substrate to expose the lower surface of the conductive line.

72. (Previously Presented) The method of claim 71 further comprising:

forming an adhesion layer over the mask layer before electroplating.

73. (Previously Presented) The method of claim 65 wherein forming the diffusion barrier comprises:

forming a layer of tungsten silicon nitrogen over substantially all of exposed surfaces of the conductive plug and conductive line.

74. (Previously Presented) A method comprising:

forming a mask layer on an integrated circuit substrate with vertically extending contact plug hole to expose an active region of the substrate;

depositing a conductor seed layer over the mask layer;

electroplating conductive material over the seed layer to form a conductive plug in the contact plug hole with a bottom surface in contact with the active area and vertically extending from the substrate;

forming a horizontally extending conductive line in contact with a top region of the conductive plug, wherein the conductive line has a bottom surface facing a top of the substrate, the conductive line is vertically spaced apart from the substrate by the mask layer;

removing at least a portion of the mask layer to expose lateral wall surfaces of the conductive plug and the lower surface of the conductive line; and

forming a single diffusion barrier on exposed surfaces of the conductive plug and the conductive line after removing the mask layer.

75. (Previously Presented) The method of claim 74 wherein the conductive plug and the conductive line comprise a copper-, silver-, or gold-based material.